

## **CLAIMS**

### **What is claimed is:**

1. An apparatus for wirelessly paging a mobile device based at least in part on a technological capability of the mobile device, the apparatus comprising:  
processing circuitry configured to access information associated with the technological capability of the mobile device and to generate a paging request for the mobile device that is based at least partially on the technological capability of the mobile device.
2. The apparatus of claim 1, wherein the paging request is based at least partially on an identifier associated with the mobile device to be paged.
3. The apparatus of claim 1, wherein the apparatus is in communication with a wireless network that comprises at least one cell, said at least one cell being configured to receive the paging request generated by the processing circuitry and to wirelessly broadcast the paging request via an antenna of the network to enable said at least one cell to wirelessly communicate with the mobile device being paged.
4. The apparatus of claim 3, wherein said technological capability includes a wireless protocol technology that said at least one cell utilizes to wirelessly broadcast paging requests to mobile devices that have the technological capability to wirelessly communicate using said wireless protocol technology.
5. The apparatus of claim 3, wherein said technological capability corresponds to a band class over which said at least one cell is configured to wirelessly broadcast paging requests and over which the mobile device being paged is configured to wirelessly communicate.
6. The apparatus of claim 3, wherein said technological capability corresponds to one or more specific channels over which the mobile device being paged is capable of communicating and over which said at least one cell is capable of communicating with mobile device.

7. The apparatus of claim 3, wherein the processing circuitry is comprised at a Mobile Switching Center (MSC) of the wireless network, and wherein the technological capability of the mobile device is stored at the MSC of the wireless network, the MSC being the home MSC of the mobile device.
8. The apparatus of claim 7, wherein the technological capability of the mobile device is stored in a Home Location Register (HLR) of the home MSC.
9. The apparatus of claim 7, wherein the technological capability of the mobile device is stored in a Visitor Location Register (VLR) of the home MSC.
10. The apparatus of claim 7, wherein when the mobile device is to be paged, the MSC generates a paging request that is broadcast only to mobile devices that have the same technological capability of the mobile device being paged.
11. The apparatus of claim 7, wherein the MSC is a serving MSC of the mobile device, and wherein the serving MSC determines when the mobile device has registered with the network comprising the serving MSC, and wherein the serving MSC obtains information relating to the technological capability of the mobile device from the home MSC of the mobile device, and wherein the serving MSC uses the information obtained by the MSC when generating a page request for the mobile device that is based at least partially on the information obtained from the home MSC relating to the technological capability of the mobile device.
12. The apparatus of claim 10, wherein the paging request that is broadcast to mobile devices having the same technological capability of the mobile device being paged is first broadcast in a last zone in which the mobile device being paged registered with the network, and wherein the home MSC accesses this registration information and includes the registration information in the page request when the page request is generated.
13. The wireless network of claim 10, wherein said technological capabilities of the mobile devices include a wireless protocol technology that said at least one cell utilizes to wirelessly page mobile devices that have the technological capability

needed to wirelessly communicate with the cell that is paging the particular mobile device.

14. The wireless network of claim 10, wherein said multiple wireless technologies of the network correspond to multiple band classes over which said MSC and said at least one cell are configured to wirelessly broadcast paging requests and over at least one of which the particular mobile device being paged is configured to wirelessly communicate.

15. The wireless network of claim 10, wherein said multiple wireless technologies correspond to multiple specific channels over which the network can issue pages and over at least one of which the particular mobile device being paged is capable of communicating.

16. The wireless network of claim 10, wherein the technological capabilities of the mobile devices are stored in a Home Location Register (HLR).

17. The wireless network of claim 10, wherein the technological capabilities of the mobile devices are stored in a Visitor Location Register (VLR).

18. A method for wirelessly paging a mobile device based at least in part on a technological capability of the mobile device, the method comprising the steps of:  
accessing information associated with the technological capability of the mobile device from processing circuitry in communication with a wireless network;  
and

generating a paging request for the mobile device that is based at least partially on the technological capability of the mobile device.

19. The method of claim 18, wherein the paging request is based at least partially on an identifier associated with the mobile device to be paged.

20. The method of claim 18, wherein the wireless network comprises at least one cell, said at least one cell being configured to receive the paging request generated by the processing circuitry, the method further comprising the step of wirelessly

broadcasting the paging request via an antenna of the network to enable said at least one cell to wirelessly communicate with the mobile device being paged.

21. The method of claim 18, wherein said technological capability includes a wireless protocol technology that said at least one cell utilizes to wirelessly broadcast paging requests to mobile devices that have the technological capability to wirelessly communicate using said wireless protocol technology.

22. The method of claim 18, wherein said technological capability corresponds to a band class over which said at least one cell is configured to wirelessly broadcast paging requests and over which the mobile device being paged is configured to wirelessly communicate.

23. The method of claim 18, wherein said technological capability corresponds to one or more specific channels over which the mobile device being paged is capable of communicating and over which said at least one cell is capable of communicating with mobile device.

24. The method of claim 18, wherein the processing circuitry is comprised at a Mobile Switching Center (MSC) of the wireless network, and wherein the technological capability of the mobile device is stored at the MSC of the wireless network.

25. The method of claim 24, wherein the MSC is the home MSC of the mobile device.

26. The method of claim 25, wherein the technological capability of the mobile device is stored in a Home Location Register (HLR) of the home MSC.

27. The method of claim 26, wherein the technological capability of the mobile device is stored in a Visitor Location Register (VLR) of the home MSC.

28. The apparatus of claim 26, wherein when the mobile device is to be paged, the MSC generates a paging request that is broadcast only to mobile devices that have the same technological capability of the mobile device being paged.

29. The apparatus of claim 26, wherein the MSC is a serving MSC of the mobile device, and wherein the serving MSC determines when the mobile device has registered with the network comprising the serving MSC, and wherein the serving MSC obtains information relating to the technological capability of the mobile device from the home MSC of the mobile device, and wherein the serving MSC uses the information obtained by the MSC when generating a paging request for the mobile device that is based at least partially on the information obtained from the home MSC relating to the technological capability of the mobile device.